

**AN ADAPTIVE RADIO TRANSCEIVER WITH OFFSET PLL  
WITH SUBSAMPLING MIXERS**

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**ABSTRACT OF THE DISCLOSURE**

10 An exemplary embodiment of the present invention described and shown in the specification and drawings is a transceiver with a receiver, a transmitter, a local oscillator (LO) generator, a controller, and a self-testing unit. All of these components can be packaged for integration into a single IC including components such as filters and inductors. The controller for adaptive programming and calibration of the receiver, transmitter and LO generator. The self-testing unit generates is used to determine the gain, frequency characteristics, selectivity, noise floor, and distortion behavior of the receiver, transmitter and LO generator. It is emphasized that this abstract is provided to comply with the rules requiring an abstract which will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or the meaning of the claims.

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